

REMARKS

Claims 1, 2, 4-9 and 11-23 are pending in the above-captioned patent application after this amendment. Claims 1, 4, 6-8, 11 and 12 have been rejected. Claims 2, 9 and 14-19 have been allowed. Claims 5 and 13 have been objected to.

The Applicants respectfully disagree with the rejection of claims 1, 4, 6-8, 11 and 12. However, the Applicants have amended claims 1, 4, 11 and 12, canceled claims 5 and 13 without prejudice, and added claims 20-23 with this amendment for the purpose of expediting the patent application process in a manner consistent with the goals of the Patent Office (65 Fed. Reg. 54603), and/or to clarify what the Applicants regard as the present invention.

Support for the amendments to claims 1, 4, 11 and 12 can be found throughout the originally filed specification. In particular, support for the amendments to claims 1, 4, 11 and 12 can be found in the specification at page 5, lines 8-31, at page 6, line 11 through page 8, line 20, at page 9, lines 27-32, at page 11, lines 7-13, in Figures 3A, 3B and 4A, and in the originally filed claims.

Support for new claims 20-23 can be found throughout the originally filed specification. In particular, support for new claims 20-23 can be found in the specification at page 5, lines 8-31, at page 6, lines 3-10, at page 9, lines 27-32, at page 11, lines 7-13, in Figures 3A, 3B and 4A, and in the originally filed claims.

No new matter is believed to have been added by this amendment. Reconsideration of the pending application is respectfully requested.

Allowable Subject Matter

Claims 2, 9 and 14-19 have been allowed. Claims 5 and 13 have been objected to by the Patent Office as being dependent on a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. As detailed below, claim 4 has been amended to include the limitations of claim 5 (effectively writing claim 5 in independent form), and claim 12 has been amended to include the limitations of claim 13 (effectively writing claim 12 in independent form).

Rejections Under 35 U.S.C. § 102(b)

Claims 1, 4, 6-8, 11 and 12 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,064,140 issued to Zumeris ("Zumeris"). The Applicants respectfully traverse the rejection of claims 1, 4, 6-8, 11 and 12. Additionally, the Applicants respectfully submit that the rejection of claims 1, 4, 11 and 12, as amended, is unsupported by the art and should be withdrawn.

More particularly, the Examiner contends that Zumeris teaches in Figures 14A and 14B (see also column 13, lines 24-47) a piezoelectric motor 172 that rotates a threaded output shaft 168, which is coupled to a carrier 160 that is guided for linear movement along the axis of rotation of the threaded shaft 168 by a guided member 162. The Examiner further contends that an object (lens for an optical reader) is contained in the area 164 of the carrier 160. Additionally, the Examiner contends that a standard feedback servo loop including a position indicator 68 is shown in Figure 5. Finally, the Examiner contends that Zumeris teaches that the motor 172 can be operated in either a continuous or a stepping manner (see column 7, line 12 through column 9, line 13).

The Applicants provide that Zumeris is directed to a ceramic motor 172 including at least one rectangular piezoelectric ceramic plate 10 having a plurality of electrodes 14, 16, 18, 20 attached onto the face of the piezoelectric ceramic plate 10 that can be excited by an AC voltage (as in Figure 1A) or by a pulsed unipolar voltage (as in Figure 3). As shown in Figures 14B and 14C, the ceramic motor 172 can be used to move a stage 160 that is mounted on a rod 162 on one side and on a worm 168 via a rack 170 on the other side. The ceramic motor 172 rotates a wheel 174 that is mounted on one end of the worm 168, so that the wheel 174 and the worm 168 are rotated by the ceramic motor 172 about an axis. As the wheel 174 and the worm 168 rotate, the stage 160 moves along the same axis as the stage moves linearly along the worm 168 and the rail 162. (Zumeris Abstract, column 5, lines 34-49, column 7, lines 13-22, column 8, lines 30-65, column 13, lines 24-42, and in Figures 1A, 3, 14B and 14C).

However, Zumeris does not disclose a mover assembly that adjusts a position or shape of an object along a first axis, the mover assembly including a motor having a motor output that moves along the first axis and about the first axis, and a coupling assembly including a stage that couples the motor output to the stage. In Zumeris, the ceramic

motor 172 includes a motor output (wheel 174 and worm 168) that is coupled to the stage 160, but the ceramic motor 172 simply rotates the motor output (wheel 174 and worm 168) about an axis while the motor output (wheel 174 and worm 168) does not move along the axis.

Further, Zumeris does not disclose a mover assembly that adjusts a position or shape of an object along a first axis, the mover assembly including a motor having a motor output that moves along the first axis, and a coupling assembly including a stage that couples the motor output to the stage, and a resilient member that urges the stage against the motor output. As noted above, in Zumeris, the ceramic motor 172 simply rotates the motor output about an axis while the motor output does not move along the axis. Moreover, the stage 160 is mounted onto the motor output (worm 168) via the rack 170, and therefore does not include or require a resilient member to urge the stage 160 against the motor output.

Additionally, Zumeris does not disclose a mover assembly including a motor having a motor output, a pair of opposed jaw elements that engage the motor output, and a piezoelectric element that rotates the motor output by moving the jaw elements relative to each other. The piezoelectric element utilized in Zumeris is simply a piezoelectric ceramic plate 10, and it does not include a pair of opposed jaw elements as claimed in the present application.

In distinction to Zumeris, amended claim 1 recites "(a) mover assembly ... comprising: a motor including a motor output that moves along the first axis and about the first axis in a step-like fashion; and a coupling assembly including a stage that couples the motor output to the object and a stage guide that guides the motion of the stage along the first axis and inhibits motion of the stage about a second axis that is orthogonal to the first axis."

Because Zumeris does not disclose all of the elements of amended claim 1, the § 102(b) rejection is unsupported by the art and should be withdrawn. Further, because claims 6-8 depend either directly or indirectly from amended claim 1, the rejection of claims 6-8 is also unsupported by the art and should be withdrawn.

Additionally, claim 4 has been amended herein to include the limitations of claim 5, which, as noted above, was found by the Examiner to contain allowable subject

matter. Accordingly, the Applicants respectfully submit that the rejection of claim 4 under U.S.C. § 102(b) should be withdrawn.

Further, in distinction to Zumeris, amended claim 11 recites “(a) mover assembly ... comprising: a motor including a motor output that moves along the first axis, wherein the motor output moves in a step-like fashion; and a coupling assembly including a stage that moves with the motor output, a stage guide that guides the motion of the stage along the first axis and inhibits motion of the stage about the first axis, a resilient member that urges the stage against the motor output, and a measurement system that provides information regarding the movement of the stage.”

Because Zumeris does not disclose all of the elements of amended claim 11, the § 102(b) rejection is unsupported by the art and should be withdrawn.

Still further, claim 12 has been amended herein to include the limitations of claim 13, which, as noted above, was found by the Examiner to contain allowable subject matter. Accordingly, the Applicants respectfully submit that the rejection of claim 12 under U.S.C. § 102(b) should be withdrawn.

New Claims

New claims 20-23 have been added with this amendment. New claims 20-23 are of a slightly different scope than the previously pending claims. However, new claims 20 and 21 depend directly or indirectly upon amended claim 1. As noted above, the rejection of amended claim 1 is unsupported by the art, thereby negating a prima facie showing of obviousness with respect to the cited reference. Accordingly, new claims 20 and 21 are believed to be patentable in view of the cited reference. Additionally, new claims 22 and 23 depend directly upon amended claim 11. As noted above, the rejection of amended claim 11 is unsupported by the art, thereby negating a prima facie showing of obviousness with respect to the cited reference. Accordingly, new claims 22 and 23 are believed to be patentable in view of the cited reference.

Conclusion

In conclusion, the Applicants respectfully assert that claims 1, 2, 4-9 and 11-23 are patentable for the reasons set forth above, and that the application is now in a condition for

allowance. Accordingly, an early notice of allowance is respectfully requested. The Examiner is requested to call the undersigned at 858-456-1951 for any reason that would advance the instant application to issue.

Dated this 20th day of July, 2007.

Respectfully submitted,


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